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10/566,847

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Briant Enoch Benson

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EXAMINER

GUIDOTTI, LAURA COLE

ART UNIT

PAPER NUMBER

3727

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/566,847 | Applicant(s) BENSON, BRIANT ENOCH | |
| | Examiner Laura C. Guidotti | Art Unit 3727 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24,31-38 and 55-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24,31-38 and 55-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02012006, 02032009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. The Applicant's election of Group I "an article", claims 1-24, 31-38, and 55-59 on 23 December 2008 is noted.

Claim Objections

2. The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

3. Claims 22 and 55-61 are objected to because of the following informalities:

In claim 22, it is believed that the word "mode" is a typographical error and is meant to be the word "more".

Claim 55 includes a typographical error in that a punctuation mark "." is in Line 5 before the end of the sentence. Claims must each be one sentence in length.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 21-24, 56-60, 65-67, and 69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the alignment of protrusions" in Line 5. There is insufficient antecedent basis for this limitation in the claim.

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Claims 56 and 57 each recite the limitation "the porous pad material" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 58-59 each recite the limitation "the" or "said fittings" in Line 1 and Claim 60 recites the limitation "the fitting". There is insufficient antecedent basis for this limitation in the claim. Claim 55 from which claims 58-60 depend may require only one or a singular fitting or alternatively more than one fitting. It is confusing whether a singular or plurality of fittings are being claimed. Likewise, claims 65-67 are also confusing. It is unclear as to whether one or a plurality of fittings are being claimed.

Further claim 67 recites the limitation "the *fluid* fitting" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 69 recites that the "base is a brush for scrubbing semiconductor wafers." This is unclear as it seems that the article is a brush for scrubbing, not the base. The base is one component of the "article".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-22, 24, 31-38, 55-57, 61-64, and 68-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Andros, US 5,311,634.

Andros discloses the claimed invention including a rotatable base (12) having one or more through channels (15) that permits fluid flow between an inner and outer

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surface of the base (as fluid is capable of flowing between a top and bottom surface of the base), a porous material covering at least a portion of the outer surface of the base (17; Column 6 Lines 7-15; see Figures), the porous material interlocked with the rotatable base (see Figures; Column 3 Lines 40-48)(claims 1, 9, 12, 21, 31, 55, 62, 63). Regarding claims 2, 12, and 32, the porous material fills one or more of the through channels (see Figures; Column 3 Lines 43-46). Regarding claims 3, 17, and 33, the porous material covers a portion of the inner surface of the rotatable base (see Figures). Regarding claims 4, 34, 55, and 62, the rotatable base further includes a fitting for mounting the base to a rotatable shaft (27; Column 4 Lines 29-40). Regarding claims 5 and 35, the porous material is a pad having one or more nodules (20). Regarding claims 6 and 36, the porous material interlocks with the rotatable base by an adhering porous pad layer (Column 3 Lines 47-49). Regarding claims 7, 37, 56, and 63, the porous pad interlocks with the rotatable base by filling one or more of the through channels (see Figures; Column 3 Lines 40-47). Regarding claims 8 and 38, the porous material is cast on the outer surface of the base (Column 3 Lines 40-46). Further regarding claims 9-10 and 64, the adherent porous pad material (17) has a plurality of protrusions (20), the pad covers at least a portion of the base surface (12; see Figures), the porous pad permitting fluid to flow through the porous pad (Column 6 Lines 7-15; see Figures). Regarding claim 11, the rotatable base (12) is a housing having through holes (15). Regarding claims 12 and 57, the channels (15) are capable of fluidly connecting the inner surface with the outer surface of the base (as 17 is porous, Column 6 Lines 7-15). Regarding claims 14-15, the base is a tube or disk (see Figures;

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one could consider it to be a very small tube in the axial direction). Regarding claims 16, 21, and 62, the porous pad material includes protrusions (20). Regarding claim 18, the pad has a monolithic structure (see Figures). Regarding claim 19, the porous pad material includes polyvinylalcohol (Column 6 Lines 16-27). Regarding claim 20, the porous pad material is capable of distributing fluid from the inner surface to the outer surface of the base through the porous pad material (as it is porous, Column 6 Lines 7-15). Regarding claim 22, the base includes through channels (15) connecting the inner and outer surfaces of the base (see Figures). Regarding claim 24, the porous pad is capable of distributing fluid from the inner surface to the outer surface through the porous material (given the nature of the porous material, Column 6 Lines 7-15). Regarding claims 61 and 68, the rotatable base is capable of being “adaptable” to or is capable of being “used on” different material removal tools by mating fittings with the base (as different tools could be used to remove the base via the fitting). Regarding claim 69, the base is a brush capable of scrubbing semiconductor wafers (Column 1 Lines 13-17).

6. Claims 1, 4-5, 21-24, 31, 34-35, 55, 58-62, and 65-69 are rejected under 35 U.S.C. 102(b) as being anticipated by de Larios et al., US 5,806,126.

De Larios et al. disclose the claimed invention including a rotatable base (230) having one or more through channels (250) that permits fluid flow between an inner and outer surface of the base (Column 4 Lines 52-57), a porous material covering at least a portion of the outer surface of the base (240; Column 4 Lines 61-67), the porous material interlocked with the rotatable base (via 260, see Figure 2) (claims 1, 21, 31, 55,

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62). Regarding claims 4, 34, 55, and 62 the rotatable base further includes a fitting for mounting the base to a rotatable shaft (220 or 260). Regarding claims 5 and 35, the porous material is a pad having one or more nodules (Figures 2-3). Regarding claim 21, the porous pad material includes protrusions (Figures 2-3). Regarding claim 22, the base includes through channels (250) connecting the inner and outer surfaces of the base (see Figure 2). Regarding claim 23, there is a source of pressurized fluid (210, 220) in fluid communication with the porous material in the channels of the base through the inner surface of the base (Figures 2; Column 4 Lines 19-51). Regarding claim 24, the porous pad is capable of distributing fluid from the inner surface to the outer surface through the porous material (Column 4 Lines 52-60). Regarding claims 58 and 65, the fittings are mated to the base by "bonding" (as there must inherently be some sort of mechanical bond in order for rotation to occur). Regarding claims 59-60 and 66-67, the fittings include a fluid fitting (220) and a machine drive tool fitting (260). Regarding claims 61 and 68, the rotatable base is capable of being "adaptable" to or is capable of being "used on" different material removal tools by mating fittings with the base (as different tools could be used to remove the base via the fitting). Regarding claim 69, the base is a brush capable of scrubbing semiconductor wafers (Abstract).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura C Guidotti/
Primary Examiner, Art Unit 3727

lcg